

WE CLAIM:

1. A cooking oven comprising:  
  
a cooking chamber in fluid communication with respect to a heat exchanger;  
  
a conveyor extending through the cooking chamber;  
  
an upper manifold extending above the conveyor;  
  
a lower manifold extending below the conveyor; and  
  
a plurality of louvers connected with respect to the upper manifold and the lower manifold, the plurality of louvers adjustable to control the air flow between the upper manifold and the lower manifold.
2. The cooking oven of Claim 1 further comprising:  
  
an adjustment arm connected with respect to the plurality of louvers, the adjustment arm opening at least one louver of the plurality of louvers and correspondingly closing at least one other louver of the plurality of louvers to control air flow between the upper manifold and the lower manifold.
3. The cooking oven of Claim 2 wherein the adjustment arm is one of manually controlled and electronically controlled.

4. The cooking oven of Claim 1 further comprising:

an inlet manifold connected with respect to the plurality of louvers, the inlet manifold routing air flow including return air from the conveyor and primary air from the heat exchanger.

5. The cooking oven of Claim 4 wherein a first plurality of louvers

are positioned in an upper surface of the inlet manifold and a second plurality of louvers are positioned in a lower surface of the inlet manifold.

6. The cooking oven of Claim 1 wherein the plurality of louvers

further comprise:

a first plurality of louvers arranged in an array across the upper manifold; and

a second plurality of louvers arranged in an array across the lower manifold.

7. The cooking oven of Claim 6 wherein the first plurality of

louvers and the second plurality of louvers are arranged in subgroups across the upper manifold and lower manifold, respectively.

8. The cooking oven of Claim 1 wherein the plurality of louvers extend along at least a portion of a length of the conveyor.

9. The cooking oven of Claim 8 wherein the plurality of louvers are arranged in subgroups positioned in rows above and below the conveyor.

10. The cooking oven of Claim 1 wherein at least one upper manifold and at least one lower manifold form one of a plurality of interchangeable modules.

11. A method for distributing air flow within a cooking oven comprising:

extending a conveyor through a cooking chamber having an upper manifold above the conveyor and a lower manifold below the conveyor;

directing air flow through a plurality of louvers connected with respect to the upper manifold and the lower manifold; and

adjusting the plurality of louvers to control the air flow between the upper manifold and the lower manifold.

12. The method of Claim 11 further comprising:

opening at least one louver of the plurality of louvers and

correspondingly closing at least one other louver of the plurality of louvers to control air flow between the upper manifold and the lower manifold.

13. The method of Claim 11 further comprising:

moving an adjustment arm to open a first plurality of louvers positioned with respect to the upper manifold and simultaneously close a second plurality of louvers positioned with respect to the lower manifold.

14. The method of Claim 11 further comprising:

directing air flow across a curved heat exchanger prior to the plurality of louvers.

15. A cooking oven comprising:

a cooking chamber in fluid communication with respect to a heat exchanger;

a conveyor extending through the cooking chamber;

a plurality of louvers connected both above and below the conveyor, the plurality of louvers adjustable to control the air flow between the top of the conveyor and the bottom of the conveyor.

16. The cooking oven of Claim 15 further comprising:

an adjustment arm connected with respect to the plurality of louvers, the adjustment arm opening at least one louver of the plurality of louvers and correspondingly closing at least one other louver of the plurality of louvers to control air flow between the top of the conveyor and the bottom of the conveyor.

17. The cooking oven of Claim 16 wherein the adjustment arm is one of manually controlled and electronically controlled.

18. The cooking oven of Claim 15 further comprising:

an inlet manifold connected with respect to the plurality of louvers, the inlet manifold routing air flow including return air from the conveyor and primary air from the heat exchanger.

19. The cooking oven of Claim 15 wherein a first plurality of louvers are positioned in an upper surface of the inlet manifold and a second plurality of louvers are positioned in a lower surface of the inlet manifold.

20. The cooking oven of Claim 15 further comprising:

an upper manifold positioned between the plurality of louvers and a top of the conveyor; and

a lower manifold positioned between the plurality of louvers and a bottom of the conveyor.

21. The cooking oven of Claim 20 wherein the plurality of louvers further comprise:

a first plurality of louvers arranged in an array across the upper manifold; and

a second plurality of louvers arranged in an array across the lower manifold.

22. The cooking oven of Claim 15 wherein one or more modules each contain at least a portion of the cooking chamber, the conveyor and the plurality of louvers to form the cooking oven.

23. The cooking oven of Claim 22 wherein the plurality of modules are interchangeable.

24. The cooking oven of Claim 22 wherein three modules form the cooking oven.

25. The cooking oven of Claim 22 wherein a first module directs air flow across an upper manifold and a second module directs air flow across a lower manifold.

FOOTNOTES: 995445-091401